

AMENDMENT TO THE CLAIMS

1. - 16. (Cancelled)

17. (Previously Presented) A recording medium having a data structure for managing reproduction of at least video data representing multiple reproduction paths, comprising:
a data area storing a transport stream of at least video data, the transport stream being divided into transport packets, each of the transport packets associated with one of the multiple reproduction paths, and the transport packets of each reproduction path being stored as a separate file from one another such that different reproduction paths represent different video data, and
a navigation area storing a first navigation unit, the first navigation unit including one or more second navigation units and controlling a reproduction order of the second navigation units, at least one second navigation unit referencing more than one third navigation unit, each third navigation unit associated with a different one of the multiple reproduction paths and indicating a separate file of video data in the data area to reproduce.

18. (Cancelled)

19. (Previously Presented) The recording medium of claim 17, wherein a number of the third navigation units associated with the at least one of the second navigation units is equal to a number of the multiple reproduction paths.

20. (Cancelled)

21. (Previously Presented) The recording medium of claim 19, wherein the at least one of the second navigation units includes a field indicating whether the at least one of the second navigation units provides navigation information for multiple reproduction paths.

22. (Previously Presented) The recording medium of claim 17, wherein the at least one of the second navigation units includes a field indicating whether the at least one of the second navigation units provides navigation information for multiple reproduction paths.

23. (Previously Presented) The recording medium of claim 17, wherein the transport packets of each reproduction path are stored in separate physical domains of the data area from one another.

24. (Previously Presented) The recording medium of claim 17, wherein each reproduction path represents a digital channel.

25. (Previously Presented) The recording medium of claim 17, wherein each reproduction path represents a sub-channel of an RF channel.

26. (Previously Presented) A method of recording a data structure for managing reproduction of at least video data representing multiple reproduction paths, comprising:

recording a transport stream of at least video data on the recording medium, the transport stream being divided into transport packets, each of the transport packets associated with one of the multiple reproduction paths, and the transport packets of each reproduction path being stored as a separate film from one another such that different reproduction paths represent different video data; and

recording a first navigation unit on the recording medium, the first navigation unit including one or more second navigation units and controlling a reproduction order of the second navigation units, at least one of the second navigation units referencing more than one third navigation unit, each third navigation unit associated with a different one of the multiple reproduction paths and indicating a separate file of video data to reproduce.

27. (Cancelled)

28. (Previously Presented) The method of claim 26, wherein a number of the third navigation units associated with the at least one of the second navigation units is equal to a number of the multiple reproduction paths.

29. (Previously Presented) The method of claim 28, wherein the at least one of the second navigation units includes a field indicating whether the at least one of the second navigation units provides navigation information for multiple reproduction paths.

30. (Previously Presented) The method of claim 26, wherein the at least one of the second navigation units includes a field indicating whether the at least one of the second navigation units provides navigation information for multiple reproduction paths.

31. (Previously Presented) The method of claim 26, wherein the transport packets of each reproduction path are stored in separate physical domains of the recording medium from one another.

32. (Previously Presented) The method of claim 26, wherein each reproduction path represents a digital channel.

33. (Previously Presented) The method of claim 26, wherein each reproduction path represents a sub-channel of an RF channel.

34. (Currently Amended) A method of reproducing a data structure for managing reproduction ~~duration~~ of at least video data representing multiple reproduction paths, comprising:
reproducing a transport stream of at least video data from the recording medium, the transport stream being divided into transport packets, each of the transport packets associated with one of the multiple reproduction paths, and the transport packets of each reproduction path being stored as a separate film from one another such that different reproduction paths represent different video data; and

reproducing a first navigation unit from the recording medium, the first navigation unit including one or more second navigation units and controlling a reproduction order of the second navigation units, at least one of the second navigation units referencing more than one third navigation unit, each third navigation unit associated with a different one of the multiple reproduction paths and indicating a separate file of video data to reproduce.

35. (Cancelled)

36. (Previously Presented) The method of claim 34, wherein a number of the third navigation units associated with the at least one of the second navigation units is equal to a number of the multiple reproduction paths.

37. (Previously Presented) The method of claim 36, wherein the at least one of the second navigation units includes a field indicating whether the at least one of the second navigation units provides navigation information for multiple reproduction paths.

38. (Previously Presented) The method of claim 34, wherein the at least one of the second navigation units includes a field indicating whether the at least one of the second navigation units provides navigation information for multiple reproduction paths.

39. (Previously Presented) The method of claim 34, wherein the transport packets of each reproduction path are stored in separate physical domains of the recording medium from one another.

40. (Previously Presented) The method of claim 34, wherein each reproduction path represents a digital channel.

41. (Previously Presented) The method of claim 34, wherein each reproduction path represents a sub-channel of an RF channel.

42. (Currently Amended) An apparatus for recording a data structure for managing reproduction duration at least video data representing multiple reproduction paths, comprising:
a driver for driving an optical recording device to record data on the recording medium;
a controller configured to control the driver to record a transport stream of at least video data on the recording medium, the transport stream being divided into transport packets, each of the transport packets associated with one of the multiple reproduction paths, and the transport packets of each reproduction path being stored as a separate film from one another such that

different reproduction paths represent different video data, and the controller configured to control the driver to record a first navigation unit on the recording medium, the first navigation unit including one or more second navigation units and controlling a reproduction order of the second navigation units, at least one of the second navigation units referencing more than one third navigation unit, each third navigation unit associated with a different one of the multiple reproduction paths and indicating a separate file of video data to reproduce.

43. (Cancelled)

44. (Previously Presented) The apparatus of claim 42, wherein a number of the third navigation units associated with the at least one of the second navigation units is equal to a number of the multiple reproduction paths.

45. (Previously Presented) The apparatus of claim 44, wherein the at least one of the second navigation units includes a field indicating whether the at least one of the second navigation units provides navigation information for multiple reproduction paths.

46. (Previously Presented) The apparatus of claim 42, wherein the at least one of the second navigation units includes a field indicating whether the at least one of the second navigation units provides navigation information for multiple reproduction paths.

47. (Previously Presented) The apparatus of claim 42, wherein the transport packets of each reproduction path are stored in separate physical domains of the recording medium from one another.

48. (Previously Presented) The apparatus of claim 42, wherein each reproduction path represents a digital channel.

49. (Previously Presented) The apparatus of claim 42, wherein each reproduction path represents a sub-channel of an RF channel.

50. (Currently Amended) An apparatus for reproducing a data structure for managing reproduction ~~duration~~ of at least video data representing multiple reproduction paths, comprising:

a driver for driving an optical reproducing device to reproduce data recorded on the recording medium;

a controller for controlling the driver to reproduce a transport stream of at least video data from the recording medium, the transport stream being divided into transport packets, each of the transport packets associated with one of the multiple reproduction paths, and the transport packets of each reproduction path being stored as a separate film from one another such that different reproduction paths represent different video data, and the controller for controlling the driver to reproduce a first navigation unit from the recording medium, the first navigation unit including one or more second navigation units and controlling a reproduction order of the second navigation units, at least one of the second navigation units referencing more than one third navigation unit, each third navigation unit associated with a different one of the multiple reproduction paths and indicating a separate file of video data to reproduce.

51. (Cancelled)

52. (Previously Presented) The apparatus of claim 50, wherein a number of the third navigation units associated with the at least one of the second navigation units is equal to a number of the multiple reproduction paths.

53. (Previously Presented) The apparatus of claim 52, wherein the at least one of the second navigation units includes a field indicating whether the at least one of the second navigation units provides navigation information for multiple reproduction paths.

54. (Previously Presented) The apparatus of claim 50, wherein the at least one of the second navigation units includes a field indicating whether the at least one of the second navigation units provides navigation information for multiple reproduction paths.

55. (Previously Presented) The apparatus of claim 50, wherein the transport packets of each reproduction path are stored in separate physical domains of the recording medium from one another.

56. (Previously Presented) The apparatus of claim 50, wherein each reproduction path represents a digital channel.

57. (Previously Presented) The apparatus of claim 50, wherein each reproduction path represents a sub-channel of an RF channel.

58. (Previously Presented) A method of creating a data structure for managing reproduction of at least video data representing multiple reproduction paths, comprising:
recording a transport stream of at least video data, the transport stream being divided into transport packets, each of the transport packets associated with one of the multiple reproduction paths, and the transport packets of each reproduction path being stored as a separate file from one another such that different reproduction paths represent different video data; and

recording a first navigation unit, the first navigation unit including one or more second navigation units and controlling a reproduction order of the second navigation units, at least one of the second navigation units referencing more than one third navigation unit, each third navigation unit associated with a different one of the multiple reproduction paths and indicating a separate file of video data to reproduce.

59. (Previously Presented) The method of claim 58, wherein a number of the third navigation units associated with the at least one of the second navigation units is equal to a number of the multiple reproduction paths.

60. (Previously Presented) The method of claim 59, wherein the at least one of the second navigation units includes a field indicating whether the at least one of the second navigation units provides navigation information for multiple reproduction paths.

61. (Previously Presented) The method of claim 58, wherein the at least one of the second navigation units includes a field indicating whether the at least one of the second navigation units provides navigation information for multiple reproduction paths.

62. (Previously Presented) The method of claim 58, wherein the transport packets of each reproduction path are stored in separate physical domains from one another.

63. (Previously Presented) The method of claim 58, wherein each reproduction path represents a digital channel.

64. (Previously Presented) The method of claim 58, wherein each reproduction path represents a sub-channel of an RF channel.